

What is claimed is:

1. A method of preparing a micro-structured powder for bonded magnets having high coercivity, comprising:

5 (a) mechanically crushing or hydrogen decrepitating a R-Fe-B type anisotropic sintered magnet or scraps thereof, to prepare R-Fe-B type anisotropic permanent magnet powders having an average size of 50-500 μm ;

10 (b) mixing the R-Fe-B type anisotropic permanent magnet powders with 1-10 wt% of rare earth fluoride (RF_3) powders having a size of 0.1-50 μm , to obtain mixed powders; and

15 (c) thermally treating the mixed powders at 500-1100°C in a vacuum or an inert gas atmosphere, to prepare R-Fe-B type anisotropic permanent magnet powders.

2. The method as defined in claim 1, wherein the step

(a) is performed by crushing the scraps of the R-Fe-B type anisotropic sintered magnet to recycle magnet scraps and
20 protect environment.

3. The method as defined in claim 2, wherein the scraps of the R-Fe-B type anisotropic sintered magnet are crushed to recycle magnet scraps and protect environment, and then mixed
25 with any fluoride selected from among NdF_3 , PrF_3 , DyF_3 and TbF_3

by the step (b).

4. A micro-structured powder for bonded magnets having high coercivity, comprising R-Fe-B type anisotropic permanent magnet powders as micro-structured composite powders, which include a matrix phase having intermetallic compounds, $R_2Fe_{14}B$, of a tetragonal crystal structure, and a grain boundary phase having a R-Fe eutectic phase and R-fluoride as a R-rich phase, in which a surface of each grain of the powders contains a large amount of a rare earth element, respective powders including 30-40 wt% of R (rare earth element), 30-80 wt% of Fe, 0.8-1.5 wt% of B, 0-20 wt% of Co and 0.1-5.0 wt% of at least one element selected from among Al, Ga, Cu, Sn, Nb, V, Zr or F, with inevitable impurities.

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5. The micro-structured powder as defined in claim 4, wherein the R-Fe-B type anisotropic permanent magnet powders have an average size of 50-500 μm .

20 6. The micro-structured powder as defined in claim 4 or 5, wherein the R-Fe-B type anisotropic permanent magnet powders have an energy product $\{(BH)_{max}\}$ not less than 20 MGOe, and a coercivity (iHc) not less than 5 kOe.